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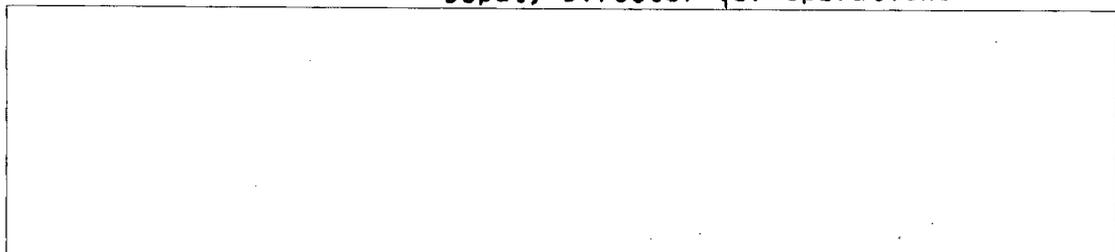
17 October 1973

MEMORANDUM FOR: The Director of Central Intelligence
SUBJECT : MILITARY THOUGHT (USSR): The Movement of
Troops Across Soviet Central Asia

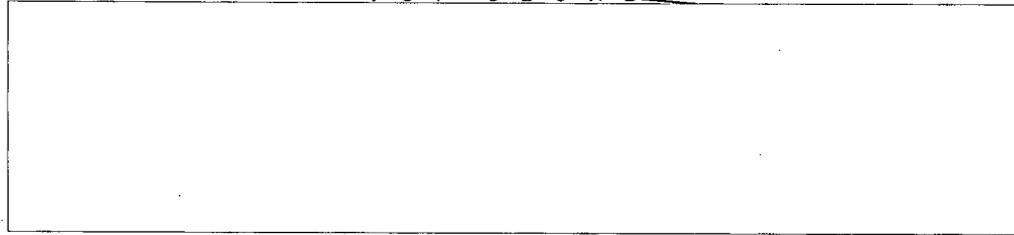
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the Secret USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article summarizes the experience of exercises conducted in Soviet Central Asia to study the advance of troops from their garrisons to the southern border of the USSR. The author concludes that troops should move under their own power, and not rely on the civil transportation system. His primary recommendation is further study of the terrain in the theater with a view to building roads which will increase the rate of advance of troops to a possible combat zone in the area. This article appeared in Issue No. 1 (80) for 1970.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies.


William E. Nelson
Deputy Director for Operations


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Intelligence Information Special Report

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SUBJECT

MILITARY THOUGHT (USSR): The Movement of Troops over Large Distances Under Conditions of the Northeastern Part of the Middle Eastern Theater of Military Operations

SOURCE Documentary
Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 1 (80) of the SECRET-USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is Lt.-Col. V. Shcherbakov. He summarizes the experience of exercises conducted in Soviet Central Asia to study the advance of troops from their garrisons to the southern border of the USSR. The author concludes that troops should move under their own power, and not rely on the civil transportation system. His primary recommendation is further study of the terrain in the theater with a view to building roads which will increase the rate of advance of troops to a possible combat zone in the area. Considerable attention is given to the timing and length of rest halts.

End of Summary

Comment:

There is no information in available reference materials which can be firmly associated with the author. Military Thought has been published by the USSR Ministry of Defense in three versions in the past -- TOP SECRET, SECRET, and RESTRICTED. There is no information as to whether or not the TOP SECRET version continues to be published. The SECRET version is published three times annually and is distributed down to the level of division commander.

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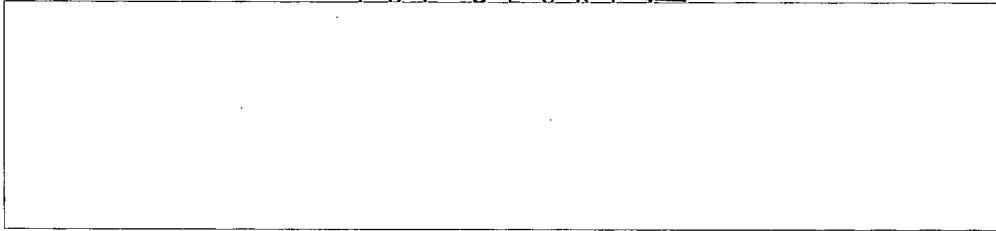
The Movement of Troops over Large Distances Under
the Conditions of the Northeastern Part of the
Middle Eastern Theater of Military Operations
(from actual experience of troops)

by

Lt. Colonel V. Shcherbakov

The organization and implementation of the movement of troops over large distances in any theater of military operations is a complicated form of activity for staffs of all levels, requiring great physical exertion by all personnel. Under the conditions of the northeastern part of the Middle Eastern Theater (Northeastern and Eastern Kazakhstan and the Tien Shan), the completion of these tasks is further complicated by a number of unique characteristics of the theater itself.

The terrain relief of the theater is extremely varied. It includes high mountain areas, deserts, and semideserts, alternating with hilly plains and salt marshes. The topographical complexity and the limited number of roads rule out the possibility of moving troops simultaneously over several routes. This area of the theater is also characterized by an extreme continental climate, with high temperature variations between day and night and between summer and winter. While summer air temperatures in some areas reach thirty-five to forty degrees centigrade, winter temperatures often fall to forty to forty-five degrees below zero, with snowstorms and blizzards in which there may be strong winds gusting to sixty to eighty meters per second. Snow cover of 1.5 to 2 meters is sometimes common in individual sectors.



The severe climatic and road conditions not only make marches considerably more difficult, but they also increase the difficulty of supplying materiel, equipment, medical services, and other forms of support to the troops. The physical burden on personnel increases greatly, there is more wear and tear on combat and transport equipment, there is a greater expenditure of vehicle resources, fuel, and lubricants (in some high mountain areas it reaches seventy percent above average), and the capabilities are limited for supplying troops with spare parts, provisions, water, fuel, etc.

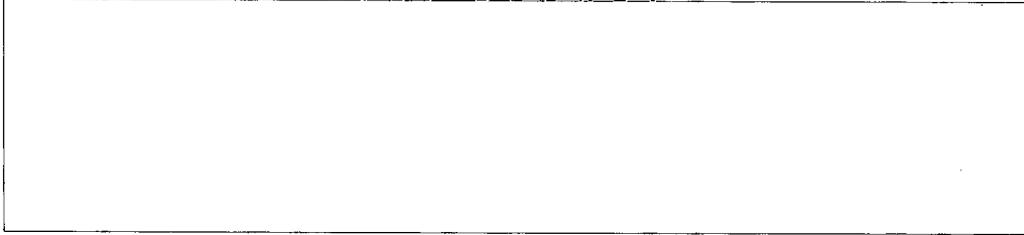
The control of units and large units on the march is greatly complicated by the poorly developed road network of this area, the enormous distances, the existence of inaccessible regions, and the concomitant necessity for actions on separate unconnected axes.

In the present article we wish to examine only a few of the problems of organizing a march for moving troops into an area of possible combat operations, based on the experience of troop command-staff exercises and war games conducted in our district.

As is known, the planning and preparation of a troop movement over long distances in any theater of military operations is done while we are still at peace, and it involves carrying out a number of measures which usually include the following: a detailed study and preparation of the routes of troop movement; the organization of control of the march, using the wire communications facilities belonging to civil agencies; the supplying of troops with fuel; the use of local resources for the restoration and repair of equipment; medical support for troops, etc.

In studying and preparing routes for troop movement in the theater under review, we concentrated mainly on reconnoitering fords, clearing out ravines, enlarging the turn radius for tracked equipment, and investigating the capabilities for moving along the shoulders of the main highways and for moving off roads. At the same time we determined the capabilities for supplying troops with





provisions, water, and fuel from local resources. This is, of course, far from a complete listing of the extensive and complex tasks performed by staffs in the advance planning of a march.

Just as under normal conditions, the movement of troops into an area of possible combat operations in our theater may be made by their own resources, by rail, or by a combination of the two. Individual units (subunits) may be transported by air. Our exercises showed, however, that the most expedient method of moving troops up to distances of 600 kilometers under these conditions is by their own resources. We do not, of course, rule out the combined method, which has both positive and negative aspects. One positive aspect is the reduction in the use of heavy tracked equipment. On the other hand, however, there is only an insignificant saving in the use of vehicle resources if rail transport is used for moves over short distances (up to 300 to 500 kilometers); besides, twice as much time is required,

Thus, in one of the exercises involving a combined march of 550 kilometers, subunits proceeding by their own resources arrived at the designated area twenty-three hours before subunits using a combination of means. The time loss was due mainly to the assembly of rolling stock and to a detour of 830 kilometers required by the rail route.

On another occasion, involving the transfer of a motorized rifle regiment by rail over a distance of 340 kilometers, fifty-six hours were lost (the regiment was transported in five echelons). This included the time expended for bringing up rolling stock and for entraining and detraining the echelons. At the same time, according to calculations and an actual troop movement made in training exercises, a regiment can cover this distance in twenty hours with one long halt of three hours.

There is no doubt that the movement of military echelons will be stepped up significantly during wartime with the shift to a military schedule of operations. Even in this event, however, much time will be lost in bringing

up the echelons, in entraining and detraining, and in the move itself.

Calculations indicate that in bringing up echelons twelve hours following the submission of the requisition (issuance of orders), troops using a combined method of march of up to 600 kilometers (with half of the distance completed by rail) arrive in the designated areas eighteen to twenty-four hours later than those proceeding by their own resources. Any saving in the wear and tear on vehicle resources cannot be used as a justification for such a time loss, especially when troops are being moved to the national border in case of a surprise enemy attack.

The use of waterways is also ruled out for rapid emergency transport of troops into an area of possible combat operations in our theater. Because of the limited number of ships, particularly platform barges, for the transport of heavy equipment, and because of the dispersion of these ships in various bodies of water and ports, it will take considerably more time to transport troops than if they proceeded by their own resources. The experience of training exercises shows that in transporting troops, for example, on the Bukhtarma Reservoir, the time needed to concentrate the troops in the border area increases by twelve to fifteen hours if the barges are brought up within twelve hours after submission of the requisition.

Also, the use of barges to transport heavy equipment is disadvantageous because of their vulnerability to air attack. Therefore, the transport of troops by water will, as a rule, take place only at night, which holds up their move even more.

It is, therefore, our opinion that the most expedient regrouping of troops over distances of 500 to 600 kilometers under the conditions of the northeastern part of the Middle Eastern Theater of Military Operations is accomplished by having the troops use their own resources. Even in this case, however, the specific conditions within the theater create certain difficulties which will require careful

organization and planning of the march by commanders and staffs.

As already noted, the limited number of routes will have an effect on the execution of the march. As a rule, divisions will have to proceed along one route or, at most, along two routes. The unhindered movement of troops under such conditions will require precise organization of the march and continual and carefully thought out control over units and subunits during it. For this purpose, a traffic control service and a service for controlling the forces and means of divisions are organized along the main routes; and equivalent services for the forces and means of the senior commander are organized in the most complex sectors, at central points, and at places where the routes of two divisions are in the closest proximity to one another or where they intersect. By order of the senior commander, traffic control and dispatcher posts are organized at these points; these posts are responsible for the movement of troops and for checking them as they pass the checkpoints (lines). In staffing these posts, it is advisable to include the following: an operations officer, a communicator, an engineer, and a representative of the military lines of communication. Check and dispatcher posts will usually be located on permanent communications lines, or, if there are none, they must be supplied with radio sets and mobile facilities. Radio communication during troop movements can take place only in emergencies and with the mandatory encipherment of messages.

For troop control on a march it is necessary to have a coded map with previously worked out call signs for checkpoints (local topographical features). As experience shows, when several large units are advancing simultaneously, it is advisable for each division to have its own code system for these points (for example, one division might use the names of birds, another might use the names of flowers, etc.). This facilitates keeping track of units as they pass checkpoints and prevents confusion when different large units are moving on one route or on two intersecting routes. With such a system it is possible to transmit from any communications point along the route of

advance, including the use of open channels of civil communications lines, a short report ("282", the callsign of a unit commander; "Hawk", a checkpoint) giving a clear picture of the status of units at a given time.

Practical training exercises are conducted in advance for the precise organization of the traffic control service, the reliable control of units, and the establishment of coordination with the officers of checkpoints and with the officers of staffs responsible for the control of troops on the march. The following matters are studied during these exercises: routes for troop movements and the features of each route; communications conditions along the routes and at checkpoints; the organization of traffic control service and movement control service, especially in areas where routes intersect or come close to each other; the possibilities for bypassing temporarily closed sectors of a route, and the movement of troops along these alternate routes; the organization of duty in temporary transshipment areas, in assembly areas after detraining, in areas where long halts are to be made, and in rest areas; the materiel and equipment support needed for troops on the march; and other problems. Advance preparation of officers regarding all of these problems will not only enable them simply to set up traffic patterns for the columns during a march, but it will also permit them to render practical assistance to the commanders of units in organizing communications, refueling equipment, supplying the troops with rations and water, etc.

In planning the movement of troops to the national border under conditions of a threatened outbreak of war, or during initial combat operations, the staffs of large units and operational formations must consider the possibility of evacuating the local populace, industrial enterprises, and institutions from the large administrative and industrial centers. If the routes pass through or near large population centers, the troops may well be placed in the very complicated position of having to proceed against civilian traffic columns headed in the opposite direction. In order to prevent this, all questions regarding the unhindered passage of troops through or near large populated

areas must be settled in advance with the staffs of Civil Defense and the necessary measures taken to ensure unhindered troop movement.

These measures include first and foremost: an agreement with Civil Defense staffs regarding evacuation routes and troop movement routes; the preparation of alternate routes; the establishment of signals for working with Civil Defense staffs and for communications with local authorities; the organization of a traffic control service including organs of the Ministry of Internal Affairs and of the Civil Defense groups; and the drafting of civil roadbuilding organizations for the rapid laying and equipping of alternate routes and the restoration of destroyed road sections. In addition, the forces and material resources of these organizations must be widely used to keep the roads in passable condition along the whole route of troop advance, particularly in sectors with passes, defiles, and fords.

—As already noted, it is more advantageous for troops to advance by their own resources in the area under consideration when they are proceeding to the national border over a distance of 500 to 600 kilometers. The difficulties connected with the limited number of roads, and with other factors, are counterbalanced to some degree by the good condition of the main roads, which are surfaced along most of their length with asphalt or black gravel-asphalt to a width of eight to twelve meters. Vehicular columns can complete a march over such roads at a high rate of speed.

For the movement of tank columns, most road sectors have well-rolled shoulders allowing the passage of heavy equipment at high speeds. However, where there are no shoulders, e.g., in sectors with passes, defiles, and fords, the heavy equipment will have to use the main highway (asphalt), which is highly undesirable in view of the rapidity with which the roads become unserviceable.

Experimental, troop-tactical, and command-staff exercises have shown that the speed of movement of mixed

columns under these conditions may average thirty kilometers per hour, the speed remaining practically constant day and night. In individual sectors of main highways, columns reached a speed of fifty kilometers per hour for distances of eighty to one hundred kilometers. Tank columns can usually travel as fast on a gravel road as can vehicle columns. Thus, in one sector, during an advance of units in March 1968, a mixed column (up to thirty motor vehicles and ten T-54 tanks) proceeded at a speed of forty-five to fifty kilometers per hour for a distance of thirty kilometers.

As a rule, the distance a mixed column can cover in twenty-four hours ranges between 220 and 270 kilometers, depending on the condition of the road, the rate of speed, the conditions for refueling tanks, and the time required for personnel rest periods. Thus, mixed columns will require forty-three hours to complete a march of 550 kilometers on one route at an average speed of twenty kilometers per hour, with two long halts of three hours each for refueling equipment and feeding the troops, and with one night (day) rest period of ten hours. Another route, over a distance of 525 kilometers, was completed by units at the same speed in forty-six hours, with the addition of one long halt of three hours because of the conditions of movement. At a speed of thirty kilometers per hour, the time is reduced to thirty to thirty-two hours, as a result not only of the increased pace but also of the reduction in the number of long halts. In both cases, the time under way between halts did not exceed six to seven hours.

As shown by calculations and by actual practice in troop movements, troops can cover 500 to 550 kilometers in two twenty-four hour periods with one rest period of ten hours and two or three halts of three hours each. In conducting a march of 600 kilometers or more, it is necessary to provide at least two long halts of eight to ten hours as rest periods for personnel (drivers and mechanic-drivers). Long halts (up to three hours) are usually called for within the limits set by the Field Service Regulations, but they should not be made too often, since this is not necessary and only leads to unjustified losses of time. In our view, the optimal interval between halts is six to seven hours. A

duration of three hours for halts allows time to refuel equipment if necessary and makes it possible for personnel to rest and be fed.

Long halts (rest periods) of eight to ten hours make sense after fourteen to sixteen hours of movement (including a three-hour halt). It must be kept in mind here that in situations in which the troops may be committed to battle from the march or may have to occupy defense lines, it is advisable to locate the last halting point near the destination of the march. This is justified since it will provide eight to ten hours in which the troops will be able to get themselves completely in order after the long march and before entering into combat; they will be able to carry out the necessary equipment repair and replenish fuel supplies; and they will be able to rest and not go into combat exhausted by a long march.

It is advisable to call a long halt (eight to ten hours) near the detraining stations at the end of a combined march, if the situation allows. This will make it possible to avoid having special assembly areas for units arriving by rail and to form columns immediately upon detrainment in accordance with the combat roles of the units. In such a case, the planning for the march must not fail to provide for the simultaneous arrival in the designated area of the subunits making the march by their own resources and those following by rail.

It makes sense to designate a rest area near the detraining stations and to use it as an assembly area even if the units (subunits) operating together are prevented by circumstances from moving into it at the same time. Such an area may constitute an ideal control point and will enable the commander to subsequently build up march formations according to the situation that has developed and combat tasks.

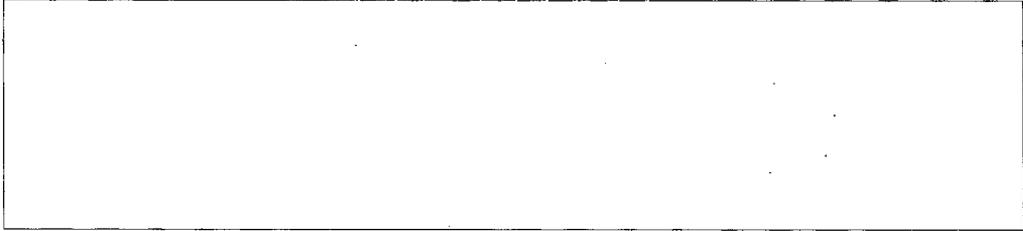
These are, to a certain degree, the ideal conditions for moving troops via good roads which permit the unhindered completion of a march into a designated area, usually in summer. However, troops may also find themselves in

unfavorable or even difficult conditions. The speed with which columns can move drops sharply when they must proceed in slush, in heavy frosts, and snowstorms, and off the main roads. Even in summer, troops lose considerable momentum when traveling over dirt roads and cross-country tracks. A march requires careful preparation and comprehensive, especially engineering support.

One of the reasons for low speeds of movement in our theater is the unique character of the terrain relief. The basic axes of troop movement here are in desert areas or in foothills. While nearly impassable quicksands and salt marshes form the main obstacles in the desert areas, the main difficulty in the foothills is the countless streams flowing down from the mountains and their dried up streambeds. In these regions the speed of troop movement is only ten to twelve kilometers per hour, even in the dry season. In passes through mountain ridges away from the main highways, troop movement is no more than ten kilometers per hour, even after some work has been done on the route of march.

The season of ice and below-freezing temperatures, with strong winds and blizzards, is highly unfavorable for marches. Snowdrifts along considerable stretches of even the main automobile roads can be a serious obstacle and can sometimes hold up columns for several hours. A typical example of this may be seen in one of the troop exercises conducted in March 1968.

A tank column spent fifty hours covering a 540-kilometer route which it had covered in forty hours in the summer at an average speed of twenty kilometers per hour. In individual sectors of the route, speed dropped to four to five kilometers per hour because of heavy snowdrifts, even though equipment was brought in to clear the roads (one hundred kilometers were covered in twenty-two hours). A mixed column also took fifty hours to cover a 250-kilometer route. In individual snow-covered sectors of the area, it was necessary to literally knock down a wall of snow and advance at a walk--two to three kilometers per hour. In summer, troops covered this route in ten to twelve hours.

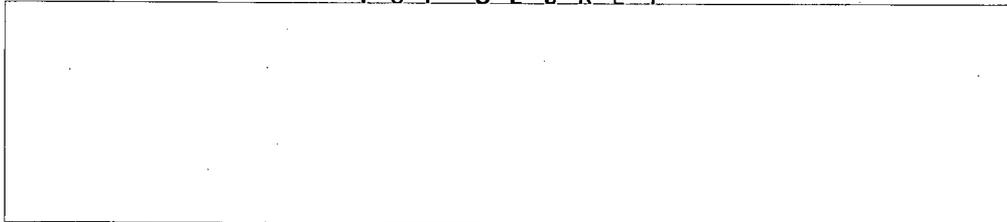


For the further movement of troops along a route and to ensure their timely arrival at the designated area, roadbuilding equipment was borrowed from local economic enterprises. This equipment was drawn from settlements lying along the axis of advance. This equipment was used to clear snowed-in sectors ahead of the advancing troops, and this further expedited their passage.

Ice has a considerable influence on the speed with which columns can travel in winter, as does even just snow cover on the road; these conditions make steering of combat and transport vehicles more difficult and dictate an increase in the distance between vehicles, as well as greater attention by drivers. All of this lowers the efficiency of drivers and driver-mechanics and sharply increases the strain on morale and physical endurance, which in turn dictates that more time be spent on rest periods during the march.

The ascents and descents in mountain passes are particularly dangerous and difficult to negotiate in winter. In order for troops to pass through these sectors, roadbuilding equipment, recovery equipment, and supplies of sand must be concentrated in advance. If troops are suddenly ordered to make a march, civilian roadbuilding organizations must be made responsible for supporting it; they must be given the assignment at the time the march begins, through the appropriate military commissariats and Civil Defense staffs.

Marches in foothills and mountains are made very difficult by frequent freshets, especially in the fall and spring. Violent torrents of water rushing down from the mountains destroy not only hydrotechnical equipment, bridges, and dams, but often large sections of the roadway as well. These torrents sometimes appear unexpectedly, even in fair and clear weather, and may constitute a sudden obstacle in the way of the troop movement. In order to forewarn troops of such obstacles, continuous reconnaissance must be conducted, including the use of helicopters; in this way the nature of the obstacles can be determined, measures be taken for their removal, or bypass routes located.



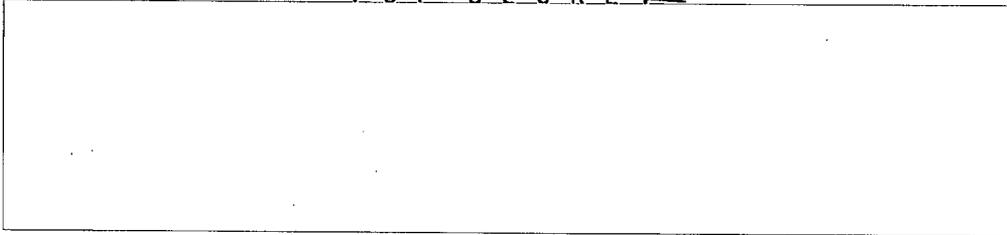
Thus, in planning and executing a long march, we must take into account not only the condition of the road network and terrain relief, but also climatic conditions, which exert an important influence on the tempo of troop movement.

In our discussion of march conditions in the northeastern part of the Middle Eastern Theater of Military Operations, we must dwell, if only briefly, on methods for troops to overcome quicksand and salt marshes. One of the essential conditions for the successful completion of a march through such areas is the need to provide support for all types of transport and combat vehicles by having available equipment which improves their cross-country capability and, also recovery equipment.

While sand represents a serious obstacle for wheeled vehicles, salt marshes are no less a problem for tracked equipment. Troops on the march should avoid moving along large rivers and near lakes whose shores abound with salt marshes. In negotiating salt marshes it must be remembered that movement is safest on existing roads, even if they are under water. With the slightest deviation from the road (running off the road), equipment may become badly stuck and require considerable effort to be freed. Particularly difficult sectors must be reinforced in advance with any available items: saksaul, reeds, branches of turanga, etc. It is advisable to choose routes through areas of salt marshes and swamps along the crest of higher ground, even if this means traveling an appreciably greater distance. In reconnoitering routes we must not rely upon external appearances to indicate the condition of the ground in areas of salt marshes: sometimes ground which appears completely dry is nothing but a thin layer concealing lakes of watery mud.

Whatever the conditions under which a long troop march is made, there must be strong march support detachments at the head of the column, each detachment consisting of at least one engineer roadbuilding company reinforced with prime movers, bulldozers, and other engineer equipment.

Some observations are now in order on the organization



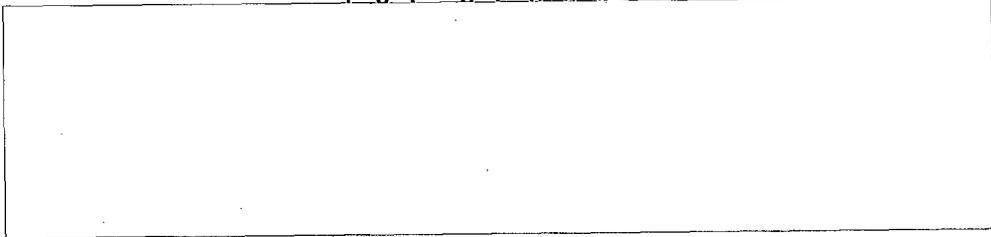
involved in regrouping divisions from the interior of the country and moving them for commitment to combat. We shall not touch upon problems of regrouping these divisions along the whole length of the march but will dwell only on the final stage.

Of course, the movement of operational reserves from the interior of the country will most probably be by rail, although under certain conditions it is possible that a move over large distances might be made by their own resources. In our theater, with the only railroad line located at a distance of 220 to 350 kilometers back from the national border, it is impossible to move reserves directly into the border zone by rail. The units must complete the march by their own resources, which will take up to twenty-four hours after detraining.

It goes without saying that the commitment of a division to combat immediately upon arrival from such a long march will not always be advantageous. Under such conditions, it is obviously more expedient to establish two stages in the subsequent march of troops arriving by rail: moving the units out of the areas in which they are assembled upon detraining and into waiting areas; and advancing them toward the line of their commitment to combat. This procedure for moving troops from the interior of the country to the final stage of the march is justified by the following considerations.

First, given the limited number of roads on which divisions can be moved, even if two routes have been prepared, it will take three to four hours (not counting the time for deployment in battle formation) just to bring the last columns up to the deployment line. It will scarcely be possible to prepare enough additional routes to ensure the simultaneous advance to the deployment lines of even the first echelon regiments with their support means. It must also be taken into consideration that the troops will have to go into combat after a long march, with POL supplies depleted and personnel fatigued.

Second, the movement of troops beforehand into a waiting



area makes it possible to concentrate all the forces of a division there following their detrainment and advance by their own resources; to use the best-prepared routes for movement into the area; to conduct detailed reconnaissance of the zone of impending operations; to refuel equipment; and to give the personnel a rest period before going into combat.

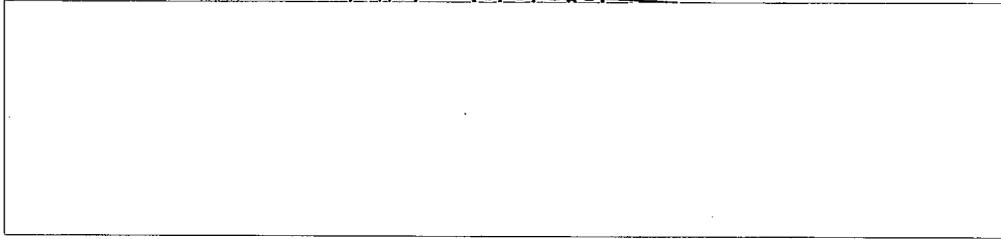
In addition, by concentrating the divisions of the second echelon of the army in a waiting area forty to sixty kilometers from the line of commitment to combat enables the army and the divisions to prepare the number of routes necessary to advance units of the first echelon simultaneously toward the deployment lines and thus to shorten the time needed to commit them to combat.

Depending on how the situation develops, it is possible that the divisions of the second echelon of the army might have to go into combat from the march, without being concentrated in a waiting area. In such a case, it would obviously be advisable to designate the assembly area after detraining at such a distance from the stations of detraining that the troops could cover the remaining distance to the lines of commitment to combat in six to eight hours. This would enable them to regroup at night, to expend a minimum amount of fuel, and to begin combat operations with relatively fresh forces.

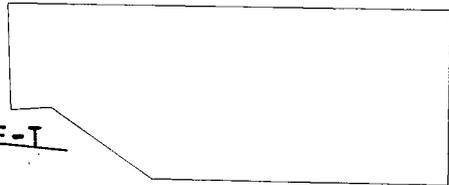
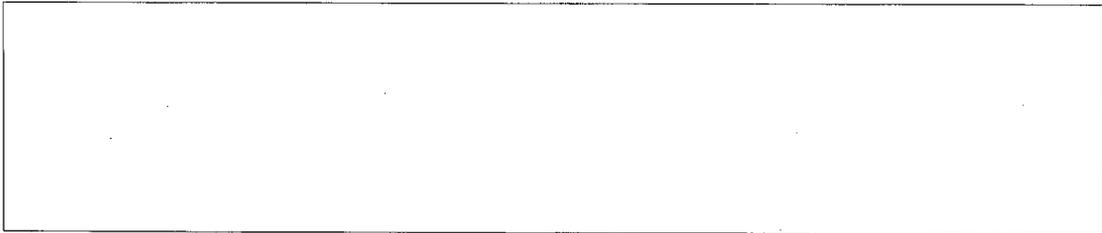
In this article we have touched upon only a few of the problems concerning the movement of troops under the conditions of our theater of military operations over distances of 500 to 600 kilometers. Many of them require further work and study. For their successful resolution we must, in our view, investigate a series of problems connected with preparing the territory of the theater of military operations as well as with organizing the march. These problems include: the careful study of the territory and a search for possibilities of building new frontal and lateral roads so that each division of the first echelon would have at least two main routes in its zone; the development of new methods of organizing the march and transporting the columns at maximum speeds; the perfection



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of a system of troop control on the march; and the heightening of the viability of troops and their capability to enter into combat from the march after long and hard marches.



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